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EXAMINER
DUFFY, PATRICIA ANN

ART UNIT	PAPER NUMBER
1645	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/866,793	VESPER, STEPHEN JOSEPH	
	Examiner	Art Unit	
	Patricia A. Duffy	1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-38* is/are pending in the application.

4a) Of the above claim(s) *34-38* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *23-38* are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

The amendment and response filed 10-7-04 and 2-15-05 have been entered into the record. Claims 23-38 are pending. Claims 23-33 are under examination.

Newly submitted claims 34-38 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 34-37 are drawn to methods of detection of antibodies in a sample. These methods are independent and distinct from the methods because they rely upon different method steps, utilize different reagents and have different outcomes. The methods do not detect hemolysin, but detect antibodies. In claim 38, different samples are used and the methods do not use labeled antibodies, to detect the hemolysin. As such, the methods are distinct from claims 22-33 already under examination.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 34-38 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Objections/Rejections Maintained

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter is maintained for reasons made of record in the Office Action Mailed 7-14-05. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification fails to provide written description support for the new term "specific hemolysin-producing fungus". Applicants argue that paragraph [0033] teaches that one can detect exposure to a hemolysin producing fungus by detection of antibodies. This is not persuasive; first it says nothing about specific or specificity and second relates to antibody detection and not hemolysin detection as claimed. That antibodies would be exclusive to a particular specific toxin is not conveyed by this

paragraph. It merely states the expected, that antibodies are formed to a hemolysin that binds the antigen to which an animal is exposed. Specificity as it relates to discrimination of different fungi as alleged, as the invention is not conveyed by written description in this paragraph. There is no evident conception of specificity for the antibodies that bind the hemolysin. Further, this passage is directed to detection of antibodies and not detection of hemolysin. Specificity has been argued in the definition of the invention as to exclusive detection or discrimination. This passage does not convey this concept. Applicants again appear to argue in circles, that is a specific- hemolysin producing fungus" is one that produces a fungal hemolysin, yet on the other hand also argue that antibodies are specific to that fungus. There is no conception of specificity or discrimination based thereon with respect to the hemolysin as compared to others or antibodies that bind one hemolysin as compared to others. This passage merely asserts that the homologous hemolysin can be used for detection of binding antibodies; there is no implicit or inherent conception of specificity as it relates to the fungus or discrimination as compared to fungal hemolysins. While there is no per se rule, conception must be present and conception of specific specificity/discrimination is not conveyed in this passage.

The objection is maintained.

Claims 23 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaguchi et al (Japanese Journal of Medical Mycology, 25(3):Abstract, 1984) in view of Harlow et al (Antibodies A Laboratory Manual, Cold Spring Harbor Press, 1989, pages 390-393) is maintained for reasons made of record for claims 2-3 and 19-21 in the final rejection of 12/19/2003 and in the Office action Mailed 7-14-04.

The claims are drawn to a method for determining if an animal has been exposed to a hemolysin-producing fungus, which hemolysin is species specific comprising contacting a sample from the animal with labeled antibodies that bind to hemolysin produced by the fungus and detecting any complex formed by the labeled antibodies and the hemolysin.

Applicants' arguments with respect to the "Present Invention" and specifically the art have been carefully considered but are again not persuasive. With respect to Applicants description of their invention, applicants set forth that the present inventor has discovered that certain fungi produce hemolysins which are specific to the particular fungus producing the hemolysin. This is not persuasive, there is no evidence in the specification using even the disclosed *Stachybotrys chartarum* hemolysin. The specification is prophetic indicating that the polypeptide fragments can be tested to determine their immunogenicity and specificity and specificity can be ascertained by testing sera, other fluids, lymphocytes for cross reactivity (page 12, [0044]). There is no written description in this specification that supports that Applicants had known and conceived that the hemolysin was Genus or species specific. No specificity studies were preformed at all, using either the full-length hemolysin or any fragment thereof. The specification as filed does not support the concept of species specificity as unique to a particular fungal species as argued by Applicants, because specificity or cross-reactivity of the antibodies to different species of hemolysin is not set forth in the specification as filed. Detection of hemolysin produced by the organism in a sample using antibodies raised to that hemolysin is specific for the hemolysin. Applicants appear to argue that specificity is unique to a species and that specificity is defined as not cross reactive by antibody or unique. This is also not persuasive, because cross-reactive antibodies bind specifically to the target antigen. The antibody combining site binding to a cognate structure on an antigen confers the specificity. The ability of the antibody to bind the same structure on different antigens is still specific and mediated by the antibody combining site. Specific binding is not defined in the specification as unique or non-cross reactive with respect to antibody means of detection. The art teaches that the *Aspergillus fumigatus* hemolysin can be specifically detected in a sample from an animal infected therewith. This animal is by definition exposed to the fungus, because it is infected. That the exposure is deliberate does not distinguish between the methods as

set forth in the body of the claims. *Aspergillus fumigatus* is a known pathogen that infects humans (Ebina et al, Japanese Journal of Medical Mycology, 39(2):155-160, 1997, see page 158, Table 2 and Table 3, in particular). The antibody raised against the asp-hemolysin specifically binds and detects the hemolysin. This is the same methodology used by Applicants for the disclosed *Stachybotrys chartarum* hemolysin. Since the specification and the art use the same methodology to produce the antibody (i.e. raised against the hemolysin from a particular genus and species of fungus), the method using an antibody made by this process is by definition, innately species-specific. An antibody raised against an antigen will by definition specifically bind that antigen. This binding says nothing about the ability of the antibody to cross-react or not with other hemolysins. The antibody art does not equate specific binding or binding with exclusive binding, as evidenced by Bost et al. (Immunol. Invest. 1988; 17:577-586) and Bendayan (J. Histochem. Cytochem. 1995; 43:881-886). That an antibody "cross-reacts", i.e., binds to more than one protein sequence, does not mean that the antibody does not "specifically react" with both proteins. For example, Bost et al. describe antibodies that "cross-react" with IL-2 and HIV envelope protein, but establish that the binding of each protein is due to the presence of a homologous sequence in each protein in which 4 of 6 residues were identical (see entire document, but especially the Abstract and Discussion). Antibodies which bound either the HIV or IL-2 derived sequence did not cross react with irrelevant peptides (e.g., "Results, page 579). Similarly, Bendayan characterizes the specific reactivity of a monoclonal antibody produced to human proinsulin and shows that although the antibody is highly specific; it is nevertheless able to bind to not only human proinsulin, but to proinsulin from other species and even a distinct protein, glucagon, based upon conservation of an Arg-Arg dipeptide sequence in each of these molecules (see entire document). Bendayan concludes that "an antibody directed against such a sequence, although still yielding specific labeling, could reveal different molecules not related to the original antigen" (page 886, last paragraph). See also U.S. Pat. No. 6210670 (Berg)

entitled "Cross-Reacting Monoclonal Antibodies Specific for E-Selectin and P-selectin". Consequently, it was well known in the art at the time the invention was made that antibody binding of distinct proteins was indeed specific. By definition if a species produces a hemolysin it is specific for that species. Specificity is not defined in the specification and the method steps define the invention and the method as combined is obvious in view of the art. Applicants indicate that the method further defines over other antigens because they are not unique to specific fungi. This is not persuasive, there is no demonstration that the antibody produced using the hemolysin produced the fungus *Aspergillus fumigatus* is does not specifically bind that species to which it was raised. The method performs two steps, contacting and detecting using an antibody that binds. These method steps are rendered obvious by the art and the antibody raised against a hemolysin derived from a particular genus and species would specifically detect that hemolysin, because the antibody was raised to that hemolysin. There is no recited element in the body of the method claim allows for discrimination of different genus and species. Applicants appear to argue that the hemolysins can discriminate between different species of fungi, however this is not set forth in the method steps. The antibody must merely bind to the hemolysin derived from the species. The antibody of the art binds the homologous hemolysin and therefore necessarily meets the limitation of species-specific. Applicants argue that a recent reference indicates that one could readily detect the fungal hemolysins, once their existence was known. The examiner maintains that the existence of fungal hemolysins were known and in fact, known well prior to the filing date of this application (asp-hemolysin: Yakota et al , Microbiology and Immunology, 21(1):11-22, 1977, Ebina et al, Japanese Journal of Medical Science and Biology, 53(3):140, 1982; Candida albicans hemolysin (Watanabe et al , Journal of Tohoku Pharmaceutical University, 46(145-148, 1999 abstract)). Asp-hemolysin is the fungal hemolysin in the references as combined. Therefore by Applicants own admission, since the fungal hemolysin was existence was known, one could readily detect it. Applicants address many alleged

inventive issues that have no bearing on the art rejection as maintained herein and are therefore moot (pages 8-10) because they are drawn to embodiments withdrawn from consideration. Applicants argue that there is nothing in the references as combined that would lead one of skill in the art to measure the ambient exposure of an animal to a particular fungus. This is not persuasive, there is no requirement for ambient exposure. The claims merely require for determining if an animal has been exposed to a specific hemolysin, that the exposure of the art is deliberate does not obviate that the method of the prior art detects exposure (i.e. deliberate) by detection of the Aspergillus fumigatus toxin in a sample. The rat of the art was exposed to a known hemolysin producing strain of *Aspergillus fumigatus*, exposure was detected using detection of hemolysin in tissue samples. Thus, the art indicates that exposure to a hemolysin producing strain of *Aspergillus fumigatus* was detected in experimental infection using detection of asp-hemolysin from Aspergillus fumigatus in tissue samples using antibodies that bind the asp-hemolysin. Applicants argue that the types of tissues needed by the art would be invasive and would not be used to detect exposure. This is not persuasive, the claims are drawn to any sample and therefore specifically encompass tissue samples as set forth in the art. Applicants argue that even though Sakaguchi et al was published in 1984, no reliable test was developed to detect exposure of animal to potentially harmful fungi. Applicants argue, it was not until applicants' invention that some specific fungi produce hemolysins that can be isolated and used for testing an animal's exposure to fungi. This is not persuasive, the isolated hemolysin is not used in the claimed assay but antibodies thereto. Further, the art already cited of record indicates that fungal hemolysins were known and isolated by the art well before Applicants invention. There is not structural definition in the claims that distinguish the fungal hemolysins of the art from Applicants hemolysins and no long felt need for detection of such. The art could detect infectious exposure of such using antibodies. This is not persuasive, antibody means of detecting fungal hemolysins in infected/exposed individuals were in the art, there was no long felt need for detection of

hemolysins associated with the specific fungal organism produced thereby. The fact that applicants may appear to argue that the hemolysins could be used to detect exposure by the detection of antibodies in a sample is not the subject of the instant claims. Applicants argue secondary considerations of "long-felt need" and potential liscencees. This is not persuasive there is no evidence of record that factually establishes these alleged secondary considerations. Further, the failure to solve a long-felt need may be due to factors such as lack of interest or lack of appreciation of an invention's potential or marketability rather than want of technical know-how. Scully Signal Co. v. Electronics Corp. of America, 570 F.2d 355, 196 USPQ 657 (1st. Cir. 1977). See also Environmental Designs, Ltd. v. Union Oil Co. of Cal., 713 F.2d 693, 698, 218 USPQ 865, 869 (Fed. Cir. 1983) (presence of legislative regulations for controlling sulfur dioxide emissions did not militate against existence of long-felt need to reduce the sulfur content in the air); In re Tiffin, 443 F.2d 344, 170 USPQ 88 (CCPA 1971) (fact that affidavit supporting contention of fulfillment of a long-felt need was sworn by a licensee adds to the weight to be accorded the affidavit, as long as there is a bona fide licensing agreement entered into at arm's length). In contrast to the above, there is no factual objective, non-opinion evidence that supports a factual finding of a long felt need by a current license. There is only a prospective licensee. Applicant again asserts that the present invention is directed to a method for determining if an animal or a building has been exposed to a specific-hemolysin producing fungus and not a method of determining the presence of a hemolysin. This again is not persuasive, the animal of the art was exposed to a hemolysin-producing fungus (deliberately) and exposure was determined using detection of hemolysin in tissue samples. Harlow et al merely provides for conventional modifications of the assay to detect deliberate exposure to a hemolysin producing fungus. Applicants continue to argue specificity and species-specificity in the preamble, however there is no method step that is different between the instant claims and the art as combined to impart any patentable difference. The preamble of the claim generally is not limiting when the claim body

describes a structurally complete invention such that deletion of the preamble phrase does not affect the structure or steps of the claimed invention. Applicants argue that nothing of the prior art suggests that the hemolysins can be used to detect exposure by detection of antibodies in the sample. This is not persuasive, the claims are not drawn to detection of exposure by detecting antibodies in a sample, but detection of hemolysin in a sample and as such these arguments are not pertinent to the instantly claimed invention. The art teaches that antibodies to a fungal hemolysin can be used to detect infection (i.e. exposure) in an animal infected therewith. The fact that the reference does not teach the formation of antibodies with exposure is irrelevant because the claims are not so drawn.

The rejection of claim 33 under 35 U.S.C. 102(b) as being anticipated by Sakaguchi et al (Japanese Journal of Medical Mycology, 25(3):Abstract, 1984) is maintained for reasons made of record in the Office Action Mailed 7-14-04 .

The claim is drawn to a method for determining if an animal has been exposed to a specific hemolysin-producing fungus comprising detecting the presence of the hemolysin produced by the fungus in a sample from the animal, the presence of the hemolysin in the sample indicating that the animal has been exposed to the hemolysin producing fungus. Applicants argue the intent of the research of Sakaguchi et al is different and they did not intend to detect exposure but were studying the effects of toxin. This is not persuasive, Sakaguchi et al practiced the method as claimed. Exposure of the animals to a hemolysin producing fungus was detected using antibodies that bound the hemolysin in an animal sample. There is not one method step of the art that is different from that as claimed and therefore the method of the prior art anticipates the claimed invention. The research intent does not obviate the fact that Sakaguchi et al practiced the claimed invention. Applicants argue that Sakaguchi et al knew that the animals were exposed to a hemolysin producing fungus. This is not persuasive, the animals of the prior art were

exposed. The claims require detection of exposure, the fact that the exposure was deliberate does not obviate the fact that exposure to a hemolysin fungus was detected by detection of hemolysin in tissue samples. Applicants merely speculate that the samples were taken from dead animals. Even if the samples were taken from sacrificed animals, this is irrelevant because the claims are not limited to samples from living animals. Do not applicants intend to use the assay post mortem ? Applicants argue that there is no recognition that a specific hemolysin could be used to identify each fungus. This is not persuasive, the method would inherently do so. It is also not persuasive, because the hemolysin that was detected was from a specific-hemolysin producing fungus. Applicants argue limitations (i.e. a specific hemolysin could be used to identify each fungus) not set forth in the claim and even if they were, the method would inherently perform this function.

The rejection is maintained for all reasons made of record.

Claims 23-29 and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention is maintained for reasons made of record in the Office Action Mailed 7-14-04.

Applicants' arguments have been carefully considered but are not persuasive. Applicants have further amended the claims to recite "which hemolysin is species specific". As set forth supra, the specification as filed lacks conception of "species specificity" and the ability to discriminate one fungus from another based on species-specific hemolysin. Applicants point to [0012] and [0013] that state "It is an object of the present invention to provide a method an reagent for screening humans and other animals for exposure to hemolysin-producing fungi" and "It is another object of the present invention to provide a

method and reagent for screening humans and other animals for exposure to *Stachybotrys chartarum*." respectively. These passages do not convey the concept of species-specific hemolysin or hemolysins that are species specific. Screening methods do not have to discriminate between genera or species of fungus. There is no discussion of the specificity of the hemolysin for discrimination between exposures to different fungi or the specificity of the hemolysin to discriminate between different fungi. There is no data in the specification that functionally supports Applicants assertions that these paragraphs provide for conception by way of written description that would indicated that species-specific hemolysins were produced and these hemolysins were able to discriminate between the genus and species of different hemolysin-producing fungi. The actual disclosure indicates that antibodies raised to the hemolysin can be used to detect strains (not different species; not different genera) of *S. chartarum* that produce the hemolysin (see [0032]). There is no discussion of the ability of the fungal hemolysin to discriminate between different species or different genera. Applicants argue that [0024] supports discrimination. This is not persuasive, the discussion is limited to determining if strains of the same genus and species produce the hemolysin. Strains of a fungus such as *S. chartarum* are not equivalent to different species of fungus (i.e. *S. atra*) and are not the equivalent to different genera (i.e. Aspergillus; Candida) There is no data in the specification that supports Applicants allegation that the contemplated screening assay was able to discriminate between the contemplated Genus and species of fungi. Detection of strains of a particular genus/species of *S. chartarum* does not support genus or species discrimination or specificity of the hemolysin to discriminate among such. Applicants improperly argue hemolysin producing strains to mean species. Applicants argue that one skilled in the art can not identify strains unless there is a distinct marker for each fungus. This idea is not set forth in the specification, further one can distinguish stains of a fungus producing a hemolysin without having a specific marker, because the genus/species have particular biochemical and growth characteristics that distinguish it

from other species, the strains of the genus/species of fungi that produce hemolysin are readily distinguished from each other on the basis of detection of production of the hemolysin. This says nothing about the ability of the hemolysin to discriminate between different species of Stachybotyrus nor different genera such as Aspergillus or Candida. Antibodies argue paragraph [0030] that sets forth that the antibodies raised to the *S. chartarum* are specific for the hemolysin. Applicants argue that this passage means that the antibodies can detect exposure to a hemolysin producing fungus such as *S. chartarum*. The term specific as it relates to antibodies is conventionally set forth in the art to reference the ability of the antibody combining site to bind the cognate structure on the antigen (i.e. hemolysin). The term specific binding or specific for an antigen does not convey the concept as exclusive binding (i.e. non-cross reactive). As evidenced by Bost et al. (Immunol. Invest. 1988; 17:577-586) and Bendayan (J. Histochem. Cytochem. 1995; 43:881-886) is known in the art that an antibody "cross-reacts", i.e., binds to more than one protein sequence, does not mean that the antibody does not "specifically react" with both proteins. For example, Bost et al. describe antibodies which "cross-react" with IL-2 and HIV envelope protein, but establish that the binding of each protein is due to the presence of a homologous sequence in each protein in which 4 of 6 residues were identical (see entire document, but especially the Abstract and Discussion). Antibodies which bound either the HIV or IL-2 derived sequence did not cross react with irrelevant peptides (e.g., "Results, page 579). Similarly, Bendayan characterizes the specific reactivity of a monoclonal antibody produced to human proinsulin and shows that although the antibody is highly specific; it is nevertheless able to bind to not only human proinsulin, but to proinsulin from other species and even a distinct protein, glucagon, based upon conservation of an Arg-Arg dipeptide sequence in each of these molecules (see entire document). Bendayan concludes that "an antibody directed against such a sequence, although still yielding specific labeling, could reveal different molecules not related to the

original antigen" (page 886, last paragraph). See also U.S. Pat. No. 6210670 (Berg) entitled "Cross-Reacting Monoclonal Antibodies Specific for E-Selectin and P-selectin". Applicant's argument attempts to limit the term "specifically reacts" in a manner inconsistent with the well-known and art-recognized specificity of antibody interaction with epitopes defined by particular amino acid sequences. Consequently, it was well known in the art at the time the invention was made that antibody binding of distinct proteins was indeed specific and therefore the passage does not convey to the art that *the antibody bound exclusively* to the hemolysin from *Stachybotyrus chartarum* and not to any other fungal hemolysin as asserted. Any antibody raised to any antigen binds it specifically, this term does not imply that the binding is exclusive or unique. For the foregoing reasons the written description of the specification does not convey the concept for either the asserted "specific hemolysin-producing fungus" or the now recited "hemolysin is species-specific".

Claims 30-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention is maintained for reasons made of record in the Office Action mailed 7-14-04.

Applicants' arguments have been carefully considered but are not persuasive. Applicants argue that the level of one skilled in this particular art is relatively high and one would expect that one skilled in the art could readily extrapolate, without undue experimentation, a method for detecting the fungi isolated from a building suspected of containing the hemolysin-producing fungi. Applicants argue that paragraphs [0025]-[0033] set forth provide a method for detecting the hemolysin using antibodies. This is not persuasive, the relied upon passages are directed to determination of exposure and

detection of antibodies as a means of determining exposure in an animal or human. These passages never mention the use of the immunoassay in context of determining if a building contains a hemolysin-producing fungus. There is no written description in these passages that conveys the concept that the immunoassay is useful in screening buildings for the hemolysin producing fungi. There is no conception of using the assay, Applicants are mixing and matching different concepts to attempt to find support for the method as is now claimed. It is noted that entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what is expressly disclosed. Lockwood v. American Airlines Inc., 41 USPQ2d 1961 (Fed. Cir. 1977). Applicants appear to admit that the assay is not expressly contemplated by arguing that the skilled artisan would need to extrapolate the teachings. As such, the argued passages do not convey the concept of the method as claimed for use in the detection of hemolysin producing fungi in a building as claimed in the specification as originally filed at the time the invention was made.

Claims 30-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention is maintained for reasons made of record in the Office Action of 7-14-04.

Applicants have amended the claim to recite a new method step of obtaining hemolysin from the sample if hemolysin producing fungi are present in the sample. However, the method still contacts the sample with the labeled antibodies. There is no relationship between step (b) as now recited and the antibodies. Further, the specification does not teach of how to obtain hemolysin from the building sample *per se*. Applicants argue that the claims have been amended to recite that the sample is cultured

and that any hemolysin-producing fungus will produce the hemolysin, that then can be detected. This is not persuasive, there is no culturing step. There is a step of obtaining hemolysin from the sample. There is no positively culturing step and Applicants arguments are inconsistent with the text of the amendment. Therefore the rejection is maintained.

New Rejections Based on Amendment

Claims 30-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 30 and dependent claims 31 and 32, the claim preamble is drawn to a method for determining if a building contains a hemolysin-producing fungus, however step (b) recites "obtaining hemolysin from the sample if hemolysin-producing fungi are present in the sample". This method step requires that one know that hemolysin is present. As such, what is the objective of the method. If you obtain hemolysin from the sample under the conditions if hemolysin producing fungi are present in the sample, then already know that hemolysin-producing fungus in the sample. Therefore, the sample is not an unknown but a known, that is known to have hemolysin. As such, the method step (b) is contrary to measuring an unknown, where the presence or absence of a hemolysin is unknown. Step (b) requires that you know that the hemolysin is present. What is the purpose of performing the assay.

Claims 23-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

The claims have been amended in the preamble to recite "which hemolysin is species-specific". There is no conception by way of written description in the

specification as filed for species-specific hemolysins. There is no inherent or implicitly showing using evidence of specificity on the part of hemolysins. There is no evidence of comparison of hemolysins from different fungi or different species within the same genus that conveys to the skilled artisan that Applicants had conceived that the hemolysin per se or antibodies thereto was species specific. The issue of specificity has been addressed fully above with respect to claims 23-39 and 33 as set forth above and in the previous office action of record. None of the relied upon passages cited and argued by Applicants convey the concept of species-specificity or specificity related to using individual hemolysins as diagnostic. The reference to detecting strains producing hemolysins does not convey support for differentiating genera and/or species on the basis of detection of hemolysin.

Status of Claims

Claims 23-33 stand rejected. Claims 34-38 are withdrawn from consideration as drawn to non-elected inventions.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia A. Duffy whose telephone number is 571-272-0855. The examiner can generally be reached on M-Th 6:30 am - 6:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith can be reached on 571-272-0864.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Patricia A. Duffy
Primary Examiner
Art Unit 1645